

November 8, 2005

Mr. Barry Quigley
3512 Louisiana
Rockford, IL 61108

Dear Mr. Quigley:

This letter responds to the petition you filed by electronic mail on March 2, 2005, with Mr. Luis Reyes, Executive Director for Operations at the Nuclear Regulatory Commission (NRC), pursuant to Section 2.206 of Title 10 of the *Code of Federal Regulations* (10 CFR 2.206). In your petition you requested that the NRC take enforcement action against Exelon Nuclear's (Exelon's) Byron Station for failure to comply with 10 CFR Part 50, Appendix B, Criterion XVI, because the 1C cold leg loop stop isolation valve (LSIV) has been broken for at least six years and has not been repaired. On March 4, 2005, you provided additional clarifying information during a telephone conference call with the NRC Petition Review Board (PRB). The transcript of the conference call was treated as a supplement to the petition. On March 21, 2005, you attended a public meeting with Exelon to discuss the issues related to the 1C LSIV.

My letter of April 5, 2005, acknowledged receiving your petition and stated that your petition was being referred to me for action pursuant to 10 CFR 2.206 and that it would be acted upon within a reasonable time. I also told you that the NRC would not take any immediate action against Exelon.

By letter dated May 4, 2005, the NRC staff requested Exelon to provide information related to the petition. Exelon responded on May 27, 2005, and the staff considered the information in evaluating your petition.

In your petition you stated that the 1C LSIV can be difficult to close, to the point that the motor's protective features actuated. You stated that the failure mechanism was metal-to-metal contact between the valve disc and a misaligned valve guide that introduced debris into the reactor coolant system. In the NRC's letter of April 5, 2005, you were informed that the LSIV does not serve a safety function; the NRC's concern was whether the valve might fail and introduce loose parts into the reactor coolant system, adversely affecting the safe operation of the plant.

The staff sent a copy of the proposed Director's Decision to you and to Exelon for comment on July 29 and August 1, 2005, respectively. By electronic mail, you responded with comments on August 14, 2005. Exelon responded on August 12, 2005. Your comments and the staff's response to them are enclosed. Exelon's comments clarified the description of certain plant components. After considering the comments, the staff revised selected portions of the Director's Decision.

As documented in the enclosed Director's Decision, the NRC staff considered whether the 1C LSIV had degraded to a point where a loose part could be generated and migrate to the

reactor vessel and the effect of the introduction of loose parts into the Byron Station, Unit 1, reactor coolant system. The staff concluded that the generation of large loose parts had a low potential of occurrence, and would only become a factor in the event of a large break Loss-of-Coolant Accident. If small loose parts in the RCS compromised the ability of the plant to achieve shutdown by normal means, a safe shutdown could be achieved through the use of safety-grade equipment in accordance with the licensee's compliance with NRC Branch Technical Position RSB 5-1, "Design Requirements of the Residual Heat Removal System." Therefore, the request to take enforcement action against Exelon's Byron Station is denied.

A copy of the Director's Decision (DD-05-05) will be filed with the Secretary of the Commission for the Commission to review in accordance with 10 CFR 2.206(c). As provided for by this regulation, the decision will constitute the final action of the Commission 25 days after the date of the decision unless the Commission, on its own motion, institutes a review of the decision within that time. The documents cited in the enclosed decision are available in ADAMS for inspection at the Commission's Public Document Room, at One White Flint North, 1555 Rockville Pike (first floor), Rockville, Maryland, and from the ADAMS Public Library on the NRC Web site at <http://www.nrc.gov> (the Public Electronic Reading Room).

I have also enclosed a copy of the Notice of Issuance of Director's Decision under 10 CFR 2.206 that has been filed with the Office of the Federal Register for publication.

Please contact George Dick (301-415-3019 or GFD@NRC.gov) to discuss any questions about to this petition.

Sincerely,

/RA/

J. E. Dyer, Director
Office of Nuclear Reactor Regulation

Docket No. STN 50-454

Enclosures: 1. Comments
2. Director's Decision
3. *Federal Register* Notice

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Barry Quigley
Byron, Unit 1, 2.206 Petition Regarding Station/1C RCS Cold Leg Loop Stop Isolation Valve

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